

*C1*  
*Excell*

and receiver encased in a stock, a moveable bolt assembly positioned within the receiver, the bolt assembly being adapted to convey a round of ammunition from the receiver into the chamber of the barrel, the bolt assembly comprising a bolt body, a bolt handle capable of moving the bolt assembly among open, closed, and locked positions, and an electrically conductive firing pin, a trigger assembly operatively connected to the bolt assembly, a voltage supply means, and a safety mechanism having at least a "safe" and "fire" position, the improvement comprising:

Column 2, Lines 29-31:

*C2*

The instant invention further provides a process for firing electrically activated ammunition from [the] an electronic firearm, such as the example of an electronic firearm described above, comprising:

Column 2, Lines 66-67:

*C3 Sub 25*

[Fig. 1 is a] Figs. 1 and 1A are side elevational [view] views of the invention.

Column 3, Lines 1-9:

*C2 Sub 45*

[Fig. 2 is a] Figs. 2 and 2A are left rear elevational [view] views of a firearm of the present invention.

*C3 Sub 45*

[Fig. 3 is a] Figs. 3 and 3A are wiring [diagram] diagrams of one embodiment of a firearm of the invention.

*C H  
Concl.*

[Fig. 4 is a] Figs. 4 and 4A are cross sectional [view] views in elevation showing one embodiment of a bolt assembly and trigger assembly of a firearm of the present invention with the firing pin in its rearwardmost position.

Column 3, Lines 17-18:

*Sub 7b*

[Fig. 8 is a] Figs. 8 and 8A are cross sectional [view] views in elevation showing the bolt assembly of [Fig. 4] Figs. 4 and 4A with the firing pin biased forward.

Column 3, Lines 21-24:

*Sub 7b*

[Fig. 10 is a] Figs. 10 and 10A are fragmental top plan [view] views of a firearm of the present invention with the barrel assembly removed.

[Fig. 11 is a] Figs. 11 and 11A are fragmental exploded [view] views of a firearm of the present invention.

Column 3, Lines 31-36:

*Sub 7b*

The description below pertains to one embodiment of an operational sequence that can be utilized by a system control means of a firearm of the present invention. [Variations] The present invention can be used with a variety of different types of firearms, and variations and modifications of this operational sequence can be substituted without departing from the principles of the invention, as will be evident to those skilled in the art.

Column 7, Lines 1-6:

~~FIGS. 1 through 11 show various aspects of possible example embodiments of a firearm of the present invention that can be adapted to utilize the operational sequence described above.~~  
[Variations] ~~The present invention can be adapted for use with a variety of different types of firearms and variations~~ and modifications of these embodiments can be substituted without departing from the principles of the invention, as will be evident to those skilled in the art.

Column 7, Lines 7-21:

*Sab 29*  
In FIGS. 1 through 11, an example embodiment of the present invention is illustrated, in which the firearm has a barrel 10 which is attached to receiver 11, and a stock 12. The stock consists of a forearm 12A at a forward portion thereof, a pistol grip 12B at a middle portion, and a butt 12C at a rearward portion thereof. Both the barrel and receiver are encased in the forearm 12A of the stock 12. The barrel has a chamber formed in its rear end where it is attached to the receiver. The chamber is connected and adapted to receive ammunition from the receiver. A bolt assembly, generally indicated as 20, is movably positioned within the receiver, behind and substantially aligned with the barrel, and has a handle 21. The barrel 10, receiver 11, bolt assembly 20, and trigger assembly 40 comprise the barrel assembly of the firearm. A safety switch [14,] 13 (FIGS. 1A, 2A, 3A, 10A and 11A) is shown behind the bolt assembly, which is shown in FIGS. 1, 1A and 2, 2A in a closed and locked position.

Column 7, Line 54 – Column 8, Line 2:

The system control means shown comprises voltage increasing means 5, an electronic switching means 5A (Fig. 3A), and means for detecting the presence of a round of ammunition 6 within the chamber. The embodiment of the voltage increasing means shown comprises a boost converter to increase the voltage from the battery to the level necessary to initiate the ammunition, for example, from 9 volts, if a battery of that voltage is used as the power source, to a voltage sufficient to initiate the electrically primed ammunition. The voltage increasing means typically comprises inductors, diodes, capacitors and switches, the arrangement of which is dependent on the specific boost converter used. Other embodiments may use converters other than the boost topology. Variations and modifications of these embodiments can be substituted without departing from those principles of the invention, as will be evident to those skilled in the art.

Column 9, Lines 23 – 32:

In addition, the firing pin plug and the firing pin are adapted to be adjustably connected, such as by the engagement of threads 28A (Figs. 4A and 8A) about the firing pin plug 28, with a corresponding thread 28B formed on the rearward area of the firing pin 29, thus permitting individual adjustment of the firing pin in relation to the firing pin plug so that the forward tip of the firing pin is adjustable with respect to the bolt face when the firing pin is biased into its rearwardmost position, thus supporting the primer cap in the ammunition during firing and preventing the firing pin from becoming lodged within the bolt body when it is forced rearward by the ignition of a round of ammunition within the chamber, as shown in [Fig. 4] Figs. 4 and 4A.

Column 11, Line 66 – Column 12, Line 5:

~~Sub P~~ The electronically controlled and operated component parts of the firearm of the present invention[, including] include, for example, the bolt assembly, trigger assembly, voltage increasing means, electronic safety, status indicator, blind mate circuitry connections, system authorization switch, and electronic switching means for isolating the firing pin also provide desirable advantages.

Column 12, Lines 20 – 35:

~~Sub P~~ The electronic switching means allows the system control to isolate the firing pin and safely discharge the voltage increasing means through a secondary path upon detection of a malfunction, such as by discharging the voltage in the voltage increasing means to ground as is known in the art.

The electronic switching means also permits the system control to isolate the firing pin if the firearm has been inactive for a period of time, or other conditions specified, including the absence of a round of ammunition within the chamber of the barrel; the firearm's safety being in the safe position; the bolt being in the unlocked position; the bolt being in the open position; the turning off of the system authorization switch; the detection of a level of voltage from the voltage supply means falling below a predetermined level; the passing of a predetermined period of inactivity of the firearm; and the failure or malfunction of the system control means or any component connected thereto.

**IN THE CLAIMS**

Claims 1 – 9 and 11 – 40 as originally filed and new claims 41-43, 45-61, and 64-90 are pending in this case.